

VOLTA BUREAU

Dr. A. Graham Bell's Private
Experimental School

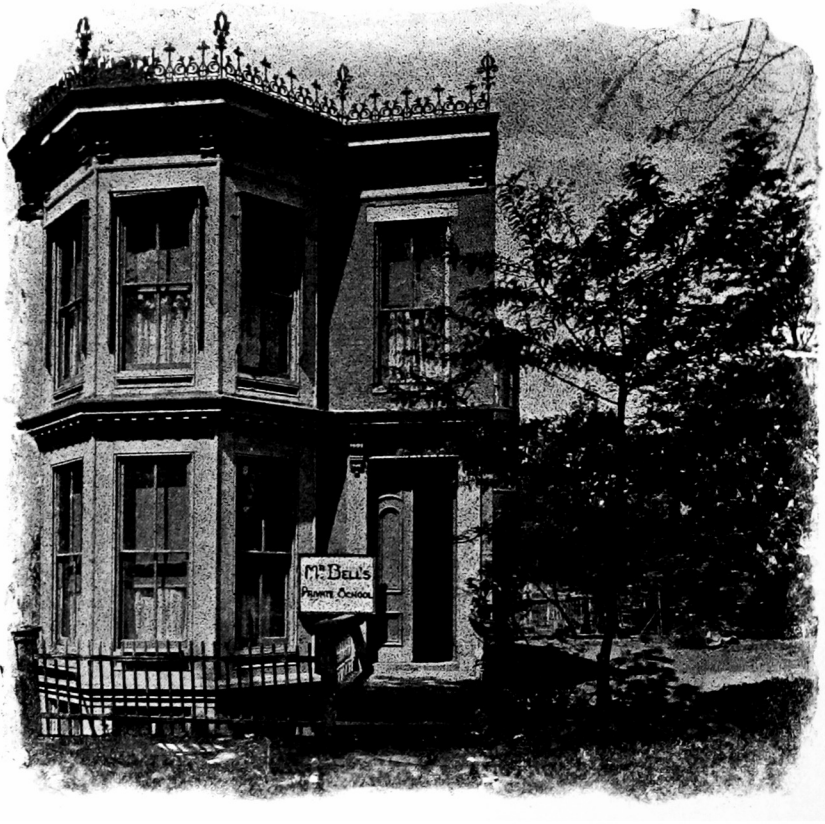
SCOTT CIRCLE
WASHINGTON, D. C.
1883—1885

By JOHN HITZ
Superintendent of the Volta Bureau

[*Reprint from HISTORIES OF AMERICAN SCHOOLS FOR THE DEAF,
prepared for the Volta Bureau, 1893*]

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(Scott Circle, Sixteenth Street, N. W.)

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DR. A. GRAHAM BELL'S PRIVATE
EXPERIMENTAL SCHOOL.

The causes which led to the establishment of this School are thus referred to in an address delivered by its founder to a select audience, October 9, 1883, shortly after its opening :

Many years ago I became interested in the education of the deaf, and anxious for an opportunity to see what I could do in teaching little children. I desired to get a very young child to experiment with. It so happened that a little boy five years of age was brought to me, and I offered to undertake his general education, although I never had had anything to do directly with the education of the deaf before. I began to study general methods, but found great difficulties in all, because all the methods I studied were adapted to children of maturer years. Here was a child of five. In many institutions children are not admitted till they are ten years of age. I studied the different works I could get hold of, and finally decided to adopt a method that was nowhere in use; that was the method proposed by George Dalgarno two hundred years ago. I adopted his plan of teaching a deaf child to read and write in a natural way, just as we teach hearing children to speak their mother tongue. Instead of commencing the A, B, C's, I adopted his plan of writing to the child as I would speak to a hearing child.

As George Dalgarno predicted, the child came to understand the writing, just as a hearing child comes to understand spoken words. Then it came about that the child wanted to write himself. At first, of course, he did not have ready command of his hands and fingers. He would make known by gestures and signs what he wanted to write, and I would write it. Then I would partially erase my writing and have him trace it over. After that stage was reached he learned his letters so that he could be able to put new words together.

The experiment with this single child was a great success. Dalgarno had not considered very fully the method of teaching speech. I adopted the system, devised by my father, of Visible Speech. That boy, in one year, was using writing materials. He wrote about everything that he wanted to communicate to his friends. The floor would be strewn with little scraps of paper on which he had jotted his thoughts. Very many of these messages were grammatical. Some of them were very odd, indeed.

Shortly after that the need of developing the speaking telephone took my thoughts away from the subject, and for a number of years I had no practical connection with the instruction of the deaf.

Inquiries, however, as to the cause of this boy's remarkable knowledge of written language led to the publication by Dr. Bell in the *American Annals of the Deaf** of an account of the lad's early training. After this he received many letters of inquiry from parents of deaf and dumb children anxious to do something for their children at home. He sent out to these parents copies of his article, and afterwards received notes from them stating that they were delighted with the progress made by their children. This, he thought, showed that a great deal could be done with children at a very much younger age than that at which they were admitted to institutions for the instruction of the deaf and dumb. A cruel wrong, he thought, was done to the deaf child in not teaching it language.

How does he think? [said Dr. Bell on one occasion.] If we try to eliminate from our consciousness the train of words in which our thoughts take form, it is hard to realize what remains, yet what remains is all the thought of a deaf child. The printed page of a book means no more to him, without instruction, than a page of Chinese does to us. How, then, does his mind grow? Chiefly by his own observation. If you watch the growth of the minds of hearing children, you will be astonished to discover how much they are developed by hearing the experiences of others. The deaf child is cut off in a great degree from the experiences of others. If left to grow up in this way, the condition of his mind is lamentable. In order to understand it, we must consider what our minds would be if we eliminated everything we ever heard of or read of. That is the condition of the deaf child that grows up without instruction—ignorance of a depth that cannot be realized; a meagerness of conception of abstract things hardly conceivable. It is an ignorance that is dangerous, and upon that danger to society rests the chief argument in favor of the public instruction of the deaf.

Early in the fall of the year 1883 a distressed mother called upon Dr. Bell to consult him in regard to a bright little child, aged four years, which had suddenly lost its hearing a few months previous, and whose speech in consequence, for want of intelligent attention, was rapidly becoming so impaired that it materially hindered intercourse and rendered the child extremely fretful and impatient. The mother's distress, the absence of any school where such a child,

*1883. Vol. xxviii, pp. 124—139; also reprinted by the Volta Bureau.

however bright, might be sent for instruction, and his conviction that prompt action would result in retaining the gift of speech, which the deaf child yet possessed, combined to decide his undertaking the work himself, and to this end he established at once what he termed an Experimental School. First of all, he determined to secure the services of a trained kindergarten teacher



MISS GERTRUDE HITZ.

unfamiliar with, and therefore impartial as to, the prevailing methods of teaching the deaf, but possessing all the requisite qualifications for the work he proposed to engage in. At the instance of Professor J. O. Wilson, then superintendent of public schools, he finally secured the services of Miss Gertrude Hitz, of Washington, D. C., and, having prepared all requisite preliminaries, opened his School on the 1st day of October, 1883. A reporter of one of the daily papers, who called in at the close of its first month of existence, gives in substance the following interesting account of it, and the method of instruction pursued : *

* *Washington Evening Star*. October 31st, 1883.

In the midst of the splendid residences that surround Scott Circle there still stands a little old-fashioned brick house. Retired from the street, with its modest front partially concealed by growing vines, it seems to court seclusion, as if overcome by the magnificence of its neighbors, and in a deprecatory way to apologize for its audacity in daring to be in such company. The lawn which bends about the front and side of the house, conforming in shape to the segment of the circle upon which it faces, is, like the house, old-fashioned, with its hedge and vine-covered arbor. There is, however, about the house and grounds just now the sweet gladness of childish voices and laughter, which is never old-fashioned. The merry groups pouring out of the doors and flitting about the lawn in gleeful play form a picture of loveliness about the old place which contrasts sharply with the stately silence of magnificence all around it. If any one should attempt to pass up the walk which leads to the front entrance, as a *Star* reporter did the other day, he must remember to go slowly ; for the little ones are all about, and they are playing games, and a thoughtless hand or a careless foot might commit irreparable injury and bring the quiver to the mouth or the tear to the eye of some sweet baby face. So, by carefully going around some mystic circle of little toddlers, or edging past a tiny savant deep in geological delving and dirt, the visitor finds himself on the front porch. Through the wide open door a glance reveals the hallway and stairs, covered with a rich, soft carpet, and a long room at the side. A young lady answers the summons of the bell and the visitor inquires :

"Is this Mr. Alexander Graham Bell's school for deaf-mutes?"

"It is," replies the young lady, and then, with an inquiring look at the stranger, she continues : "Mr. Bell is at present in the school-room : who shall I say called?"

Her question had a suggestive sound, and imparted an air of remoteness, as if she had said, "Mr. Bell is at present at the North Pole; who shall I say called?"

With some misgivings, therefore, the visitor produced a card, and the young lady was obliging enough to take it upstairs.

Presently Mr. Bell himself came down and greeted the visitor in his cordial manner.

"I have come to see your new school," said the reporter, rather abruptly.

"It is a new school in every sense of the word," replied Mr. Bell, as he led the way into the front room and took a seat. "We have hardly taken possession yet of this building. We are still moving from the other house which we have been occupying since October 1st. I have rented this house for a year, and it is about ready for use."

"The children seem to be rather talkative for mutes," observed the reporter, as a flood of childish chatter and laughter floated in through the doorway and windows.

Mr. Bell smiled, and said :

"I will show you *my* school. These rooms down-stairs are for the use of a kindergarten school, and the children playing outside are the scholars. The school for deaf-mutes is upstairs, and it is the only

school of the kind in the country, for the reason that it is an attempt to educate the two classes of very young children together. Perhaps you are not aware," he continued, in an earnest tone of voice, showing that he was deeply interested in the subject, "that there have been two methods of educating deaf-mutes. The first, by placing them in schools with other children. The result of this has always been that one class of children has been neglected for the other, and justice done to neither. Then the deaf-mutes were placed in institutions by themselves, and this has had the unfortunate tendency of keeping them separate and apart from the rest of the world. Now, in this school, I propose to try a new experiment, which will be the mean between these two systems. The deaf children will be instructed by themselves, but they will play with the hearing children in the playground, and join them for an hour or so every day in the kindergarten occupations. The deaf children will watch the actions of the hearing children and see them talk, and thus in their play-hours they will acquire facility in the articulation method, which we will try to teach them. Children learn more rapidly from each other than they do from older persons, as any parent will tell you, and these little ones will supplement the instruction given to their less fortunate companions.

"But come upstairs, and you will see the school in operation," exclaimed the inventor, as he rose to lead the way.

"This is our school-room."

It did not look like any school-room the reporter had ever seen before. It might have been a parlor. The doorways and windows were hung with handsome curtains and portieres, and the floor was covered with a soft rug. There were no desks or maps, and in the recess formed by the bay-window was a cute little divan that ran all around it, just high enough for the little ones to climb up on the soft cushion. There were pictures on the walls, and ornaments on the mantel and in the cabinets. But, after all, the charm of the room was not in these things, but rather in the group of fair-haired children that clustered in a circle about a low table which stood in the centre of the floor. They were playing some little game with pieces of pasteboard, and the teacher, a young lady, seemed to be as absorbed in the amusement as were the children. Presently the group dissolved, and a new game was begun under the guiding direction of the teacher, who was employing the kindergarten method.

"That little girl over there," remarked Mr. Bell, pointing to a child whose merry face was wreathed in smiles, and who looked the picture of health and happiness, "lost her hearing some time ago, and since then she has been gradually losing the power of speech. She can talk but very little now, and in a short time, if she continues shut off from the speaking world, she will lose the faculty of speech entirely. She can now be made to understand only a very few things. You can't tell the child anything, for you have no way of making her understand. She is gradually forgetting how to talk."

The little girl, now six years of age, still retains some few words of speech, but it was the baby prattle which she had used before she

had become deaf. Playing with her were two little girls about three and five years of age.

"All of my deaf-mute children are not here to-day," continued the scientist, as he caressed a little head that was resting against his knee.

"These two little girls are my daughters. They are both able to speak and hear; but for the present I am going to have them with this little girl, as I think that they will aid her in acquiring visible speech. They are accustomed to talk with their mother, who is entirely deaf, and hence the movements of their lips are very distinct."

"Perhaps I can give you some idea of the method of articulate teaching," he suggested, as he crossed to the opposite side of the room and stood in front of a white polished surface which served as a black-board. Pointing to a series of black characters that resembled in their general appearance Chinese words, he said: "These characters are a modification of the phonetic alphabet invented by my father. The lines and curves which form them represent the shape of the mouth when the words are uttered. For instance, take the word 'Run,' which is represented by this character. Now, that is formed by the signs phonetically representing those three letters. The characters are taught to the children, as I can practically demonstrate to you," and he paused, and turning to the young lady teacher who was standing near asked if the children could have a lesson.

The young lady thought that they could, but just then the children had begun a fine game of hide and seek, and only one was visible. A murmur of laughter revealed the hiding-place of another from behind the door; and, finally, the little deaf girl was drawn from beneath the window-curtains, screaming with laughter, and all the rest joined in her merriment.

A row of tiny chairs was then drawn up in front of the board, and the children, together with the teacher, formed the class. The inventor, with a pointer in his hand, and his kindly face winning the attention of the restless little ones, stood in front of the class, and the singular recitation began. A recitation without a sound being uttered is like a river without water, but this was the kind that was conducted. Mr. Bell pointed to one of the characters on the board, at the same time moving his lips as if he was speaking the word. The first character represented the name of a child, and the one designated readily recognized her name and assumed an attitude of attention. Then the pointer moved along to another character, and the little girl rose to her feet. Following the pointer with her eye, and then watching the lips of her instructor, the little one began to walk up and down, then ran, and finally ran to the door, as she interpreted the visible speech from the lips of the inventor. In this way the little deaf girl was told to do a number of things, and she readily comprehended what was wanted.

When Mr. Bell turned to speak to the visitor the little ones scampered away again to their play, and the lesson was over.

"After this school has fairly started," he remarked, "I don't intend to have an audible word spoken in the school-room. The teacher

will communicate entirely with the scholars by means of visible speech. Even when they wish a plaything they make use of these bits of card-board, which, as you see, contain the names of various toys and objects. Here, for instance, is one which has the name 'doll' written on it. The doll itself is similarly labeled, and the child by comparing the two soon becomes familiar with the written word. Then when they see it on the board they will at once recognize it."

"Does the inability to speak in a deaf-mute mean physical incapacity?" inquired the reporter, branching off into the general subject.

"Very young children, who are hard of hearing or who do not hear at all, do not naturally speak," was the reply; "and this fact has given origin to the term 'deaf-mute,' by which it is customary to designate a person who is deaf from childhood. So constant is the association of defective speech with defective hearing in childhood that if one of your children, whom you had left at home hearing perfectly and talking perfectly, should, from some accident, lose his hearing, he would also naturally lose his speech. This is so true that even a slight impairment of hearing is accompanied by a corresponding imperfection in speech."

"Why is this the case?" interrupted the listener.

"The most ingenious and fallacious arguments have been advanced in explanation," was the reply. "The learned Sibscota, 150 years ago, argued that the nerves of the tongue were connected with the nerves of the ear, and a defect in one caused a corresponding defect in the other. Even now the majority of people believe that deaf children are dumb on account of defective vocal organs. But why should children speak a language that they never heard? We do not, and no one would argue that our vocal organs were defective because we do not speak Chinese. It is a fallacy. The vocal organs of the deaf are as perfect as our own."

"Why, then, do they not speak?" asked the reporter.

"There is no reason why they may not all be taught to speak save our ignorance of the mechanism of speech. The difficulties in the way of teaching them articulation lie with us. Speech is the mechanical result of certain adjustments of the vocal organs, and if we can explain to the deaf children the correct adjustment of the particular organs they possess, they will speak. The difficulty lies with us. We learn to speak by imitating the sounds we hear in utter ignorance of the organic action that accompanies the sound."

"There has been one fallacy which has greatly impeded progress in the education of the deaf," continued Mr. Bell, "and that is the idea that there could be no reason without speech. It is difficult for us to realize the possibility of a train of thought being carried on without words. The old theory was that if a deaf-mute was to be taught to think, he must first be taught to speak, and attempts were made to do this by imitating the miracles of Christ. As you saw in the case of the little girl, if a child possessed of its hearing and speech should suddenly become deaf, little by little the mother tongue is forgotten, and the child becomes a deaf-mute. Experience has shown that the

speech is very readily restored by causing the child to observe the movement of our own vocal organs.

"But here again," continued Mr. Bell, thoughtfully, "a new fallacy has arisen, namely, that speech is as clearly visible to the eye as it is audible to the ear. When we come to examine the visibility of the elementary sounds of our language, we shall find that the majority are not visible to the eye. When the lips are closed we cannot see what is going on inside the mouth. For instance, the sounds represented by the letters p, b, m, involve a closure of the lips, but while it is impossible for a child to say definitely whether the sound you utter is p, b, or m, he knows it is one of these three, for no other sounds involve a closure of the lips. So with words. He may not be able to tell the precise word that you utter, but it is possible for him to refer it to a group of words presenting the same appearance to the eye. For instance, the words 'pat,' 'bat,' and 'mat' have the same appearance to the eye, but the deaf person can readily distinguish which is meant by the context. As, for example, were you to say that you had wiped your feet upon a mat, it could not be pat or bat.

"Context is, therefore, the real key to the art of understanding speech by the eye," said Mr. Bell, with emphasis. "But this involves, as a prerequisite, a vernacular knowledge of the language. In cases where congenitally deaf children have acquired the art of reading speech by the eye as perfectly as those who have become deaf from disease, it is found that they have first acquired a vernacular knowledge of the language, at least in its written form. It is a curious fact, also, that long words are more visible than short words. The gesture language is used as vernacular in our modern institutions, and this prevents the acquiring of English as a vernacular, and also causes the deaf to associate together in adult life. The gesture language is an artificial and conventional language quite different from English."

"You propose, then, to teach one language," suggested the listener.

"There is no reason that I can see for teaching a person, because he happens to be deaf, a foreign language," was the prompt reply. "By associating the deaf children with the hearing children as far as possible, they will acquire the more rapidly the power of communicating with them. If they have a language of their own, they are bound to associate together in adult life, and the consequence is they intermarry and their affliction is transmitted to their offspring, so that statistics to-day actually show that the deaf-mutes are increasing in number.

"In regard to the education of the deaf in this way," he continued, "the system is not an untried one. In 1878 I organized a day-school in the city of Greenock, Scotland, and occupied a room in the academy there, which contained, I should think, upward of 200 hearing children. In this room the deaf children were taught by a special articulation teacher, sent from America. They were caused to associate with the hearing children in every way possible. They played with them in the playground, and joined them for instruction in such subjects as writing, drawing, sewing, etc. The success of this school

has been so great that the board of education has recently adopted it as a permanency, throwing it open to all the deaf children of Greenock and the surrounding towns. I visited the school about a year ago and found that all the deaf pupils had formed many friends among the hearing pupils of the academy, with whom they conversed quite freely by word of mouth. Their vernacular use of the English language was quite remarkable, especially when we consider that they were either born deaf or had lost their hearing in infancy.

"The mother talks to the child in whole sentences, and the child understands what is said long before it can speak. That is what I am doing with these little children. I talk to them all sorts of nonsense on the board, just such as you hear in the nursery. Well, the hearing child, in his first efforts to speak, tries to remember these sounds, and, finally, he succeeds, but at first imperfectly, and this period of imperfect speech continues for a long time. The hearing child uses his ears; in my school the deaf child will use his eyes. That is all the difference. After I have established communication with the child, then I will write the characters representing the sound of the words on the board. I will speak the words. Then the child sees the form of the sound just as the other child hears it, and tries to imitate it. The imitation is imperfect. Then, as the mother repeats words, and the child, after long practice, attains the correct pronunciation, so will I write on the board the form of the sound of the word as incorrectly pronounced by the child, and then the correct form. The child's eye sees the difference between the false and the true sound and tries to attain the latter. He succeeds just as truly as a baby's prattle is changed by constant practice into the correct forms of English speech."

The daily journals of this School, kept with rare analytic exactness, are intensely interesting and instructive to the student of pedagogy, as would also be the work in line-writing and visible speech of each pupil; all of which has been carefully preserved and deposited for safe-keeping in the Volta Bureau. At the close of the first year's existence of the School, the teacher, Miss Hitz, summed up the results, in part, in a paper read before the Third Convention of Articulation Teachers in New York, June 25—28, 1884, from which the following extracts are culled:

As one's daily surroundings have so much to do in moulding effects and producing results, it seems suitable that I should say a few words about our school-rooms. They had morning and afternoon sunshine. There was a large bow-window, with a cozy seat running around its curve. This window overlooked a garden which, in the spring, burst into a wonder of bright colors and sweet smells. It will always be a pleasure to recall the memory of those rooms, with the air of the nursery and a touch of home; the walls, with their pictures of

happy children ; the open fire-place, the pretty little chairs and tables, the curtained shelves full of kindergarten materials, the other toys, the horse with real hair, the steam-cars, the beautiful doll with her own chair and crib and trunk full of clothes. We had a *museum full of common things*—a collection of as many every-day, ordinary things as we thought of. These were put into bottles and labelled on one side in line-writing, and on the other side of the bottle in script.

We had large white-boards. They were thick plates of ground glass, backed by white cotton cloth, the whole being simply and tastefully framed. These boards were jointly invented by Prof. Bell and myself. We were able to use charcoal instead of chalk, which is certainly more healthful and agreeable for such constant use. The benefit to the eyes, thus obtained by black on white instead of white on black, or, as it generally becomes, white on gray, is acknowledged by the best oculists and educators. I must not omit to state that white-boards, when compared to black-boards, have a very great æsthetic value, as they give clean, light, cheerful effects to the room.

The chief object of this school has been the development of speech. Therefore, all kindergarten methods have been subservient to that end. We have had kindergarten principles in our play, in our school government, and in our general work.

In the pleasant little house which we occupied there was a regular kindergarten for hearing children on the first floor, while we had our special school for deaf children on the second floor. The deaf children went down-stairs for all the kindergarten games and for most of the kindergarten occupations. This plan has worked so admirably in giving a thoroughly natural companionship among hearing children that it must be acknowledged as a very great success.

At first the deaf children were shy about taking prominent parts in the games, but even on the first day my journal tells us that a little boy, congenitally deaf, "entered with real enjoyment into the spirit of the kindergarten games with the hearing children, and actually tried to sing !" Gradually, as our stock of words increased, some of the games were intelligently explained and understood, and now these little deaf children enter so heartily into the pretty games that, when visitors come, I have frequently been asked the convincing question, "Which are the deaf children?"

The hearing children and the deaf children, thus thrown together in their daily interests and enthusiasms, have learned to feel a genuine sense of companionship. These little ones have proved that in the free, generous, loving fellowship of childhood all difficulties are surmounted, all differences are forgotten. In their spontaneous, happy way these little hearing children have talked to the little deaf children, and the deaf children have understood enough to make them want to understand still more, and—to talk also !

In our special work upstairs, we began by playing, and have been playing ever since, as much and as hard as we could. At first, everything was labelled—the doors, the walls, the windows, the tables, the chairs, and the playthings. In order to give the children the idea that these pictures, or written words, were the names of the objects

upon which they were pasted, we established what we called "the shop-system." We had racks filled with cards. On these cards were written the names of the objects. When the horse was wanted, we would lead the horse to the card-rack and hunt the card which bore the same word-picture as the label on the horse. Having found it, I would speak the word *horse*, place the child's hand at my throat, and after the child had made an effort to reproduce the word in speech, the card was handed to me, and the child received the horse. In these first days, it was not so much *what* was said, nor *how* it was said, that we felt to be of importance. Our chief aim was to establish the *idea* of speech. By and by, as the words became familiar, we did not need the cards with their written symbols. But, instead of hunting a card, the children come to me directly and speak the words.

In the beginning, we talked and wrote to the children constantly, saying anything and everything, and having them try to speak only the important words or nouns, the names of their playthings, just as we naturally do with hearing children who are learning to talk. We introduced active verbs almost immediately, by simple class-exercises. As fast as new words were suggested and known, they were combined into sentences, and, after a sufficient drill in class-exercises, these sentences were transferred to the reading-book. * * *

One of the pleasantest and most interesting exercises has been our "lunch." We had a set of doll's dishes, tiny glasses, forks, spoons, knives, napkins, etc., to match. Sometimes the table was set by regular command; that is, the order was written on the board and then read or spoken. It is a well-established fact that all children like to eat. It is a logical consequence that children are very sure to ask, in some way, for what they want to eat. As our school was essentially a speech-school, it was necessary that the children should have some definite way of finding out the names of things. So we had the names of all the articles of food written on tiny cards and stuck into the articles themselves. Each child had a little box full of similar cards at the side of his plate. When he wanted any special thing, he would hunt up a card in his pile, and match the name of the article desired. Then showing it to me, I would give the child the spoken form of the word and he would repeat it. Gradually the cards were left aside. The little girl, who had once heard, began to speak in full and rounded sentences, and the little boy would ask for what he wanted by words instead of signs. The sentences were naturally limited, but among those which were frequently used at our table I could always be sure that both children would understand whatever I might ask them. This lunch-exercise has afforded opportunities for a little training in table manners, and has certainly been a real incentive to speech and speech-reading.

We have learned that deaf children do not use signs if they can have words.

We have learned that the kindergarten should be studied and used in the home.

We have learned that departments for deaf children should be established in connection with free kindergartens.

We believe a new world lies before the deaf child. Language is to be developed naturally. A great command is to be gained. The kindergarten is a means for this end. It develops mind and heart and the child's whole being. It brings him in harmony with outward nature. Let us be ready to offer the little child a natural way to express his full, eager, young life. Oh, it is a great and glorious work ! What is the natural way ? Does not every mother-heart know ? Does not every one who has felt the beauty of child-life know ? Can we wait until the *school age* ? For what was this sweet, eager, impressionable time of infancy and youngest childhood given ? Is it not especially for the general development of body and mind and heart ? Is



MISS S. E. LITTLEFIELD.

it not especially for the development of speech ? *Ought we to wait ?* How can we allow these little spirits to be imprisoned by our neglect of human nature's most natural time for *spontaneous speech* ? Are we not overlooking one of God's best opportunities ?

Miss Hitz, having in the meantime married, resigned, and was succeeded by Miss S. E. Littlefield, of East Boston, Massachusetts, from whose report, at the close of the second year, I make the following extracts :

The second year of the School opened the first day of October, 1884, with four pupils—F. B., who was eight years old ; G. H., five ;

P. R., four and a half, and S. R., P. R.'s sister, three ; all of them born deaf.

G. H. was in the School during its first year and had made progress enough to furnish a foundation for future work. He could speak many words distinctly, and remembered well the exercises he had learned the first year, reading readily such sentences as "Walk to the door," and showing his comprehension of the meaning by immediately following the direction.

He had traced through tracing-paper, but had no inclination to write by himself either on the board or on paper.

The only steady instruction F. B. had received was during the spring, before he entered school, when for a few weeks he received special attention ; yet he had a vocabulary of eighty words, learned at different times, all of which he recognized when written, and some of which he spoke, understanding them also when spoken by others. He had tried to write. Three o's, a top to the first connecting lines to the second, and a loop to the third, was *dog*. He seemed so nearly equal to G. H. in his acquirements, I put them into one class and found they worked well and enjoyed working together. They formed the senior class.

P. R., when entering school, knew a hundred words and a number of sentences. His father had taught him principally by means of labels. The names of the objects were also put on a card, eight by twelve inches, in printed capitals at first ; afterward the script form was found to serve as well. When one card had been filled, another was taken.

S. R. was a beginner, three years of age ; her only accomplishment the power of imitation. This, however, was of use to her ; for, by imitating the others, she gradually learned the meaning of much that she saw written.

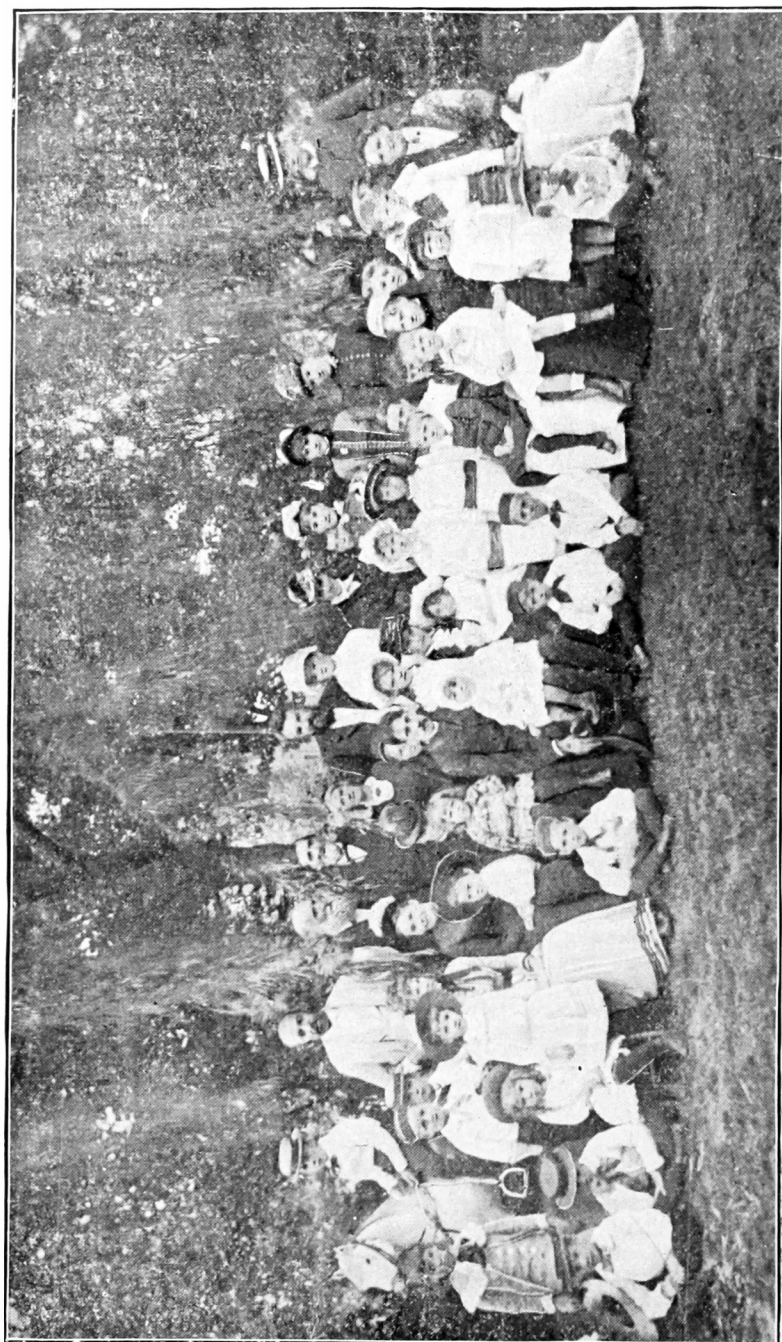
Two weeks after the opening of school G. O. returned. She had been with G. H. the previous year ; could talk well (had lost hearing suddenly at the age of five), but could not understand speech readily. She was with us only until Christmas, when she left to go to Indiana with her mother, remaining away all winter.

In December, W. L., a little boy nearly five, joined the class, completing the number. He had lost hearing when beginning to talk. For some time he was very shy, and I had to wait until he became accustomed to the place and the people before making a beginning.

For a few weeks we had our full number, six, which made a large class, each one required so much individual attention.

The first days of the term were very hot, and but little was done in the way of work. One hour was spent with a kindergarten class in games and occupation ; the rest of the time was spent chiefly in making acquaintance with the various toys in the school-room.

That they might have an exercise in which all could take part together, I wrote the words Stand, Sit, Walk, Run, on the board. This was tried every day, with something added each time. They enjoyed the exercise because it kept them in motion.



DR. BELL'S SCHOOL : CHILDREN, PARENTS' CLASS, TEACHERS, AND FRIENDS,

In our plan of school-work it was arranged that communication with the children should be by means of line-writing the first part of the day, and by Roman letters (common script) after the intermission. As the pupils were expected to copy some of the exercises from the board, a knowledge of writing was necessary. It was easy to copy line-writing, the characters being simple lines. All the writing was on paper; at the end of each session the papers were stamped with a date and carefully put away.

At the end of the first hour, while the seniors were having a kindergarten game down-stairs, the other children had occasional exercises with a hand-mirror, when they seemed to be "making faces." The object was to teach them how to use their tongue. They learned with mirrors to imitate positions of the mouth.

When the others returned they all took part in an exercise together, such as was begun the first day. "Walk to the door," "Stand by the fire," "Run to the window," "Sit on the floor," "Touch," with the names of the different pupils following, and many other sentences were taught in this way. After speaking a sentence, I would point it on the board, and if it was something new, do it first myself. After once showing, they usually remembered, for the same exercise was given with slight variations until the words became familiar.

Our class exercise was followed by a kindergarten occupation with the class down-stairs. When it was time to go I pointed to the board, where "Go down-stairs" was written, at the same time speaking the sentence. This occupation was one of the chief pleasures of the day. They learned to build with blocks, wove little mats of colored papers, sewed colored crewels into card-board, moulded with clay, folded squares of tinted paper into different shapes, and built cubes and other figures with sticks and peas. At first they required much assistance, but gradually did with less. As soon as they knew how, they were encouraged to do the work themselves, and they took pleasure in doing it well.

From 11.30 to 12.30 there was an intermission, during which the children took lunch and played under the supervision of the kindergarten teacher, thus giving their own teacher an opportunity to attend the parents' class, which met at that hour, beginning the 9th of October and lasting through the year.

In that class theories were discussed, experiments tried, tests made.

Instruction began with a study of the mechanism of speech, including the anatomy of the vocal organs. After gaining a knowledge of visible speech, attention was turned to line-writing, a shorthand of visible speech, which was the principal means of communication in the school-room. In a few months line-writing became so familiar that some members of the class could write it faster than they could ordinary script. To the pupils it was as speech to hearing children. The seniors now read it as fast as it is written without waiting for the paper to be turned toward them—even upside down.

When, in November, the subject of a manual alphabet was discussed, some of the parents' class were opposed to it; some thought it

would help the pupil to gain a clear knowledge of *written* language. It was necessary to have one that would not require the constant use of the eyes and so interfere with speech-reading. Mr. Bell told his experience with a glove alphabet, a modification of Dalgarno's, which he had successfully tried, and the class immediately began learning it, wearing on the left hand a glove on which were marked the letters of the alphabet. After becoming familiar with the positions, the glove was discarded. After some practice this alphabet can be read by the sense of touch. One can talk to a child while spelling on his hand, thus addressing two senses at the same time.



MISS NELLIE CONNOR.

Previous to opening the School for the third year, Miss Littlefield resigned, having been called home by the illness of a near relative.

Dr. Bell just at that time was deeply engrossed in affairs connected with the memorable telephone litigation, in which his character was ruthlessly assailed. His time and attention were imperatively demanded in another direction than the affairs of his private school.

The matter of selecting for the third time a qualified teacher to be placed in charge could not be given the requisite consideration, and rather than continue the School with inadequate assistance, debarred as he was from giving it his personal attention, he finally, greatly to his regret, concluded to withdraw altogether, and in October, 1885, the members of his late parents' and students' classes essayed to continue the School on their own responsibility. To this end the following assignment was effected:

Articulation Department.

Instructor, MRS. CATH. BINGHAM.
 Assistant, MISS ANNA SCHMITT.

Manual Department.

Instructor, MRS. E. S. DAVIS.
 Assistant, MISS NELLIE CONNOR.

This arrangement, however, after a brief trial, was discontinued, and the School definitely closed.

As already stated, the School was organized more especially for experimental purposes, and during its brief existence gave encouraging evidence to those interested that its underlying principles were correct, and that the methods pursued in the instruction of the deaf, if conscientiously adhered to, would accomplish all that the founder claimed for them. That the School could not be continued under the immediate supervision of its founder was a misfortune rather than his fault or the fault of the principles which it aimed to embody and illustrate.

These were set forth clearly in a letter, on record in the journal of the School, written by Dr. Bell in response to an inquiry of one of his adult pupils, of which the following is an extract :

The necessary *preliminary* to good speech is that the pupil should have a definite conception of how we pronounce our words ; that he should have in his mind a definite *model* which he attempts to copy. With this model in the mind, the defects of his speech will be due not to defective *aim*, but to defective *execution*, arising from lack of control of the organs of speech (to be corrected by showing him what he said).

Learning to speak is like learning to shoot. (1) The learner must clearly perceive the bull's eye on the target *before he can take aim*. (2) He must also see *where his bullet struck* when he shot wide of his mark. The first and prime necessity is that he should clearly perceive the definite point on the target at which he is to aim. It is evident that, if the target should be permanently obscured by fog, he could never become a good marksman, however much he might try. Now, apply this to the case of F. and G. Their speech is defective—they are poor marksmen. What are we to do to remedy the defects and improve the speech? The first question that arises is : What are the *causes* of the defects? Are they due to defective *aim*, to defective execution, or to both causes? * * *

Now, it is evident that, before they can even *attempt* to give the correct pronunciation, they must have some definite idea as to what that correct pronunciation is. * * * No amount of drill on elementary sounds, etc., will be of avail to produce good pronunciation if the model does not remain in the memory. The elements may all be perfectly acquired, and yet the speech will be imperfect and vague. We can see that in the case of a semi-mute. In such a case the *ability to pronounce correctly* is present, but the "what to pronounce" is only vaguely perceived.

The thing of most immediate importance in improving the speech is to *impress the model upon the mind*. The experience of last winter shows that it is not only necessary to present the pronunciation clearly and unambiguously, but pupils must be led to copy that pronunciation clearly and unambiguously *from memory* for us. This memorizing of the model pronunciation is, to my mind, the first and most important step. * * *

The only way we can be *sure* that the model pronunciation has been memorized is by a resort to manual reproduction. Pupils should write or spell the pronunciation.

Our utmost efforts on articulation alone will, I firmly believe, be insufficient to accomplish the result if the *conception* of the correct pronunciation does not remain constantly in the memory. Hence I believe that articulation *should* be secondary and the *conception* of articulation be made predominant. To attempt the constant and habitual correction of the pronunciation before the child's mind is familiar with the *picture* of the pronunciation will, I am sure, result in the usual unpleasant *nagging* process with which we are only too familiar in articulation schools. Let our main efforts be expended, for the present, in getting our pupils to memorize the picture of the pronunciation of the words and sentences they understand when written and spoken, and we will substitute a power of *inward self-correction* for correction constantly applied only by pressure from without. When we know that the picture is fixed in the mind, then pressure from outside can be gently applied to cause the pupil to attempt to copy correctly with the mouth the model that is in his memory. Till that model exists in the mind, the correction of his speech cannot, I am sure, be accomplished by *our* efforts alone. Is not speech-reading of importance as well as speech? And what is the necessary *preliminary* to speech-reading? The *prerequisite* without which good speech-reading is an impossibility? Is it not sufficient familiarity with the English language to enable the pupil to distinguish ambiguous words by *context*? If I am right, does it not follow that good speech-reading is a *result* and not a *cause* of familiarity with the English language? Hence the English language in a clear, unambiguous form *comes first*.

Again, we come to writing and spelling as a *means* to good speech and speech-reading. A clear, definite picture of spoken language existing in the mind must aid speech-reading. Familiarity with written speech, to my mind, comes *before* spoken speech and speech-reading, and becomes a cause of both. * * *

I cannot too strongly insist on the truth of the proposition that speech-reading is a *result*, and not a cause, of familiarity with the English Language.

The immediate reasons which actuated Dr. Bell in finally closing the School altogether are stated in the following memoranda entered upon its journal :

I felt convinced of the necessity of this school being in the hands of an experienced teacher ; I could not be responsible for the progress of pupils under amateur teachers, unless an experienced teacher was associated, or unless I could personally be in constant attendance. The bitter attacks made against my personal honor in telephone law-suits compelled me, much against my will, to devote a large portion of my time to the evidence in such cases. My time promised to be so fully occupied that I could only hope to be able to spend a short time occasionally in the school. * * * As I had anticipated, so it turned out—my time was too much occupied with other matters to allow me to pay more than an occasional visit to the class-rooms.

The pupils occupied the building during the remainder of the school year (1885—'6), and then I gave up the building and grounds (which were only rented), convinced that it was hopeless for me to carry on a school that would be satisfactory to me, unless I could obtain an experienced teacher who would remain *permanently* in charge. My first teacher married and left me after one year. My second teacher was compelled to leave me on account of the death of her mother. * * *

I do not think that a school like mine, where the methods of instruction are experimental, can be a success unless the teacher in charge remains permanently for several years, so as to profit by the results of our experiments. * * * I mean a school where I can work practically, and develop experimentally new and better methods of teaching very young deaf children. I cannot afford to devote all my time, and do not think it worth while to reopen the school unless I can have such a person in charge. (Signed) A. G. B.

